REMARKS/ARGUMENTS

This is in response to the official action dated August 15, 2007. Claims 21-32 remain pending in this application with claims 21 and 29 being the only independent claims. Reconsideration is requested in view of the arguments presented below.

Rejections under 35 USC § 103

Claim 21, 23-26, 29-32 are rejected under 35 U.S.C. §103(a) as obvious over Masseroni et al. (EP 1 257 096 A2) in view of Tong et al. (U.S. Patent Publication No. 2003/0123414 A1). Claims 22 and 28 are rejected under 35 U.S.C. §103(a) as obvious over Masseroni et al. and Tong et al. in view of Tolli (U.S. Patent Publication No. 2006/00144544 A1). Claim 27 is rejected under 35 U.S.C. §103(a) as obvious over Masseroni et al., Tong et al. and Tolli in view of Weigand (U.S. Patent No. 6,963,554).

Applicants respectfully traverse the prior art rejections for the reasons set forth below.

Independent Claims 21 & 29

Claim 21 is directed to "A method for detecting multiuser behavior on an aerial interface in GPRS and EGPRS mobile radio systems" including the step of "acquiring and evaluating during a transmission of subscriber data on an aerial interface, additional information contained in subscriber data by a device on a network side and/or a subscriber side, both in the uplink and the downlink; and identifying a number of parallel subscribers in used timeslots based on the additional information." (emphasis added)

The Examiner acknowledges that Masseroni et al. fails to teach this limitation but asserts that it is taught by Tong et al. "Tong discloses identifying a number of parallel subscribers in used timeslots based on the additional information (paragraphs 19, 20, 57, and 72, read as a plurality of bits to identify one or more user terminals for which the data in the HSD frame is intended)." (See August 15, 2007 Non-Final Office Action: p. 4, ll. 7-9) Thus, rather than "identifying a *number* of parallel subscribers in used timeslots" (emphasis added), instead, Tong et al. teaches identifying those user terminals for which the data in the HSD framed is intended. Nothing is either disclosed nor suggested concerning either the timeslots themselves, nor the

number of users to a particular used timeslot, as claimed. Accordingly, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 21.

Claim 29 is the apparatus counterpart of independent claim 21 and thus patentable over the prior art of record for at least the reasons expressed above with respect to claim 21.

Dependent Claim 22

Claim 22 calls for (i) "comparing at the beginning of a Temporary Bit Flow (TBF) the number of the <u>used</u> Radio Link Control (RLC) blocks with an <u>actually available and hence usable number</u> of RLC blocks, and the identifying step comprises the step of identifying a number of parallel subscribers in used timeslots based on the additional information contained in the RLC blocks." (emphasis added).

The Examiner acknowledges that this limitation is not found in Masseroni et al. but asserts that it is nevertheless taught by Tolli. "However, Tolli discloses wherein the acquiring and evaluating step comprises the step of comparing at the beginning of a Temporary Bit Flow (TBF) the number of the used Radio Link Control (RLC) blocks with an actually available and hence usable number of RLC blocks, and the identifying step comprises the step of identifying the number of parallel subscribers in the used timeslots based on the additional information contained in the RLC blocks (paragraph 36, read as the monitoring and the parameter can be base [sic] on measuring the number of reserved TBFs compared to the total number of TBFs or number of TBF users in GPRS-based systems). (See August 15, 2007 Non-Final Office Action: p. 6, ll. 5-11)

Applicants respectfully disagree with the Examiner's position. The relevant passage from paragraph 36 of Tolli reads "Alternatively, the monitoring and the parameter can be based on measuring the number of reserved TBFs (temporary block flow) compared to the total number of the TBFs or number of TBF users in GSM or GPRS-based systems." In contrast to the present claimed invention that compares RLC blocks (the number used with the number actually available and hence usable) the passage cited in Tolli compares TBFs. Furthermore, nothing in Tolli discloses or suggests "identifying the number of parallel subscribers in the used timeslots based on the additional information contained in the RLC blocks", as found in claim 22.

Dependent Claim 23

Claim 23 includes the step of "evaluating parameters Uplink Status Flag (USF) and/or Temporary Flow Identifier (TFI) as additional information". The terms USF and TFI are recognized terms in the art associated with GSPS systems. Masseroni et al. being directed to a GSM-GPRS system also employs an Uplink State Flag (USF) and Temporary Flow Identifier (TFI), however, the reference fails to disclose or suggest the use of these flags specifically for the detection of the number of parallel subscribers in used timeslots, as found in claim 21, from which claim 23 depends.

The Examiner maintains that Masseroni et al. (paragraph 38 discloses this claimed limitation). (See August 15, 2007 Non-Final Office Action: p. 4, ll. 14-17) Applicants respectfully disagree. The relevant passage of paragraph 38 from Masseroni et al. states "We can now better quality the already mentioned PACKET UPLINK ASSIGNMENT message, sent by the network towards the mobiles, stating that it includes: the identified TFI of the downlink/TBF buffer containing the control block carrying this message, the list of the allocated PDCH channels (time slots), and a corresponding USF value for each allocated channel. Three bits are foreseen for the USF field that enable to unambiguously discriminate up to eight users sharing a time-slot, also in the borderline case in which the single TBF buffer are associated all the eight time slots of a FDMA frame." This passage merely refers to the fact that USF and TFI are specified, but fails to disclose or suggest that these flags are specifically used "as additional information" from which is determined the detection of the number of parallel subscribers in used time slots, as found in claim 21, from which claim 23 depends.

Dependent Claim 24

Claim 24 further calls for the step of "determining for the duration of an uplink TBF, *how many* USF's are allocated by the network side" (emphasis added). The relevant passages of Masseroni et al. (Paragraphs 68, 72, 73, 93 and 94) referred to by the Examiner recognize the use of USF flags during uplink and storage in queues of these flags or those USF flags valid for uplink scheduling. Once again, the prior art reference fails to disclose or suggest determining the *number* of USF's allocated by the network side, much less, making this determination for the duration of the uplink TBF, as found in claim 24.

Applicants submit, the Examiner has improperly interpreted these passages of the prior art reference which does not disclose the storage in the buffer UL_BUFFER_TS(j) of the <u>number</u> of USF flags, but instead teaches each of these buffers UL_Buffer_TS(j) contains the <u>queues of the USF flag themselves</u>.

Dependent Claim 25

Similarly, claim 25 calls for "determining for the duration of a <u>downlink</u> TBF, <u>*how many*</u> USF's are allocated by the network side" (emphasis added). This claim is patentable over the prior art reference for the reasons provided above with respect to claim 24. Neither Masseroni nor Tong either discloses or suggests tabulating or keeping track of the <u>number</u> of USF's allocated by the network side, much less, doing so for the duration of a downlink TBF, for reasons similar to those discussed above in claim 24 with respect to uplink.

Dependent Claim 27

Claim 27 specifies "determining in a static allocation process, the usage of the timeslots for the RLC blocks by counting the data frames".

Masseroni et al. is directed to a procedure for the scheduling of packet data transmission permits on radio channels shared by the mobiles in GSM-GPRS systems (Paragraph [0001]) and is *limited exclusively to dynamic*, rather than static, allocation of resources (see Paragraphs [0036]-[0037]). None of the prior art references disclose "in a static allocation process" determining "the usage of the timeslot for the RLC blocks". Even assuming, *arguendo*, that the Examiner were to identify a reference teaching the usage of the timeslot for the RLC blocks in a static allocation process, the language in Masseroni et al. limiting the invention exclusively to dynamic, rather than static, allocation of resources, would teach away from any such modification. Accordingly, so long as Masseroni et al. is the primary reference cited, the Examiner has failed to establish a *prima facie* case of obviousness.

Furthermore, the Examiner in rejecting the claim states "...Weigand discloses that this determination is based on counting the data frames (column 16 lines 55-60, read as the frame tick count register can correspond to a predetermined offset to the end of the frame)." (See August 15, 2007 Non-Final Office Action: p. 8, ll. 1-3) The relevant passage cited by the Examiner

reads "The time base unit 520 also receives input from a frame tick count register 1007. The frame tick count register 1007 stores a frame count, whereon a frame tick is generated. The frame tick count register 1007 input is received by a comparator 1015. When the time base counter register 1010 is equivalent to the frame tick count register 1007 the comparator 1015 causes the time base unit 520 to generate a frame tick output." Nothing in Weigand either discloses or suggests that the frame tick counter be used to correspond to a predetermined offset to the end of the frame nor that it be used to determine the usage of the timeslots for the RLC blocks, as claimed. The Examiner acknowledges this by stating that "the frame tick count register *can* correspond to a predetermined offset to the end of the frame" (emphasis added) despite the reference failing to disclose or suggest this limitation. Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990) Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness.

Dependent Claim 28

Claim 28 includes the step of "evaluating for the entire lifetime of the respective uplink TBF and/or downlink TBF, the RLC data as well as the RLC/MAC control blocks for all TBF's in existence at that time and in all timeslots allocated to the respective TBF, and determining based on these data if multiuser operation has occurred at the time of data transmission". Thus, two parameters must be evaluated: (i) the RLC data and RLC/MAC control blocks <u>in existence at that time</u>; and (ii) the RLC data and RLC/MAC control blocks in all timeslots <u>allocated</u> to the respective TBF.

The Examiner acknowledges that these limitations are not taught by Masseroni et al. or Tong et al., and relies on Tolli for teaching this feature. Specifically, the Examiner asserts that this limitation is taught in paragraph 36 of Tolli when he states "read as the monitoring and the parameter can be base [sic] on measuring the number of reserved TBFs compared to the total number of TBFs or number of TBF users in GPRS-based systems...." (See August 15, 2007 Non-Final Office Action: p. 7, ll. 5-7)

Applicants respectfully traverse the Examiner's interpretation of this passage of Tolli

which reads "Alternatively, the monitoring and the parameter can be based on measuring the number of reserved TBFs (temporary block flow) compared to the total number of the TBFs or number of TBF users in GSM or GPRS-based systems." Tolli discloses monitoring of TBFs, rather than RLC or RLC/MAC control blocks much less, (i) the RLC data and RLC/MAC control blocks in existence at that time; and (ii) the RLC data and RLC/MAC control blocks in all timeslots allocated to the respective TBF. Furthermore, nothing in any of the references either alone or in any combination thereof teach the monitoring of such parameters for determining if multiuser operation has occurred at the time of data transmission, as found in claim 28.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Assistant Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,

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